



FIRST FLOOR
ABATEMENT
PLAN

TES TM-101

QuES&T, Inc.

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AT

Mechanical

& Electrical

Engineer:

WEST HAVERSTRAW
EMENTARY SCHOOLS
ES SED# 50-02-01-06-0-025-018
ES SED# 50-02-01-06-0-024-015

STONY P

STONY P

WEST

ELEMENT

FES SED# 50

TES SED# 50

WHES SED# 50

MICHAEL SHILALE ARCHITECTS, L.L.P.

140 Park Avenue New City, NY 10956 Tel 845-708-9200

ABATEMENT
PLAN

ASBESTOS ABATEMENT LEGEND

- ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM FLOOR TILES AND MASTIC.
- 2 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF PCB LOUVRE CAULK .
- 3 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM DUCTWORK, INSULATION, PIN MASTIC ACM AND VIBRATION ISOLATORS.

REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS .

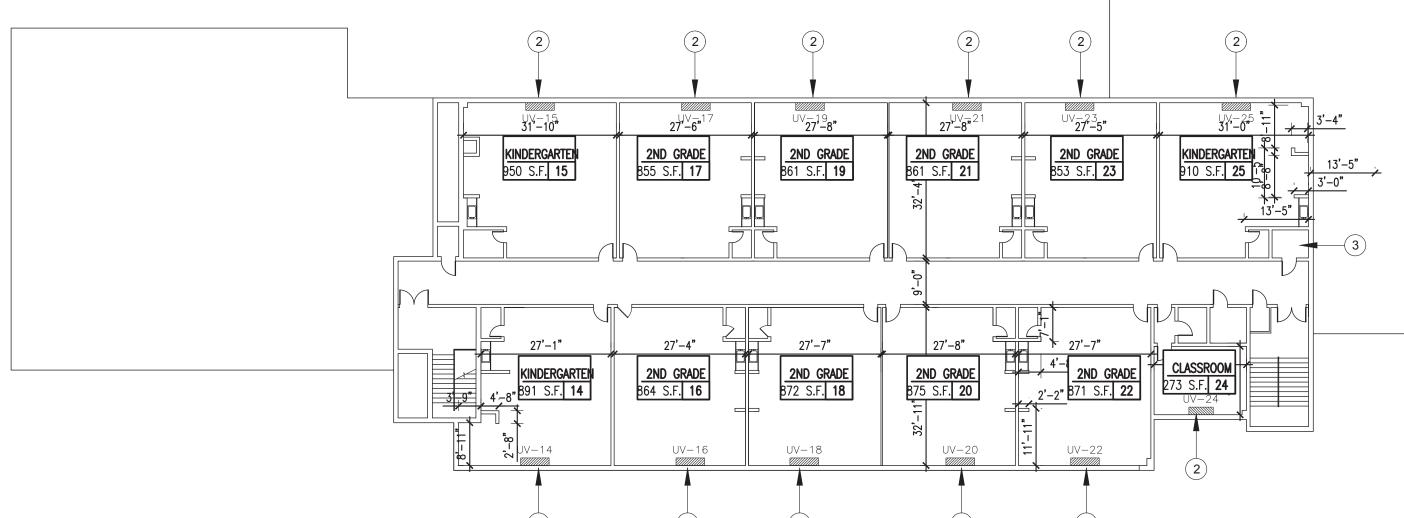
REFER TO PCB ABATEMENT SPECIFICATION 028400 - 3.13 FOR A MORE DETAILED DESCRIPTION OF THE PCB ABATEMENT WORK REQUIREMENTS .

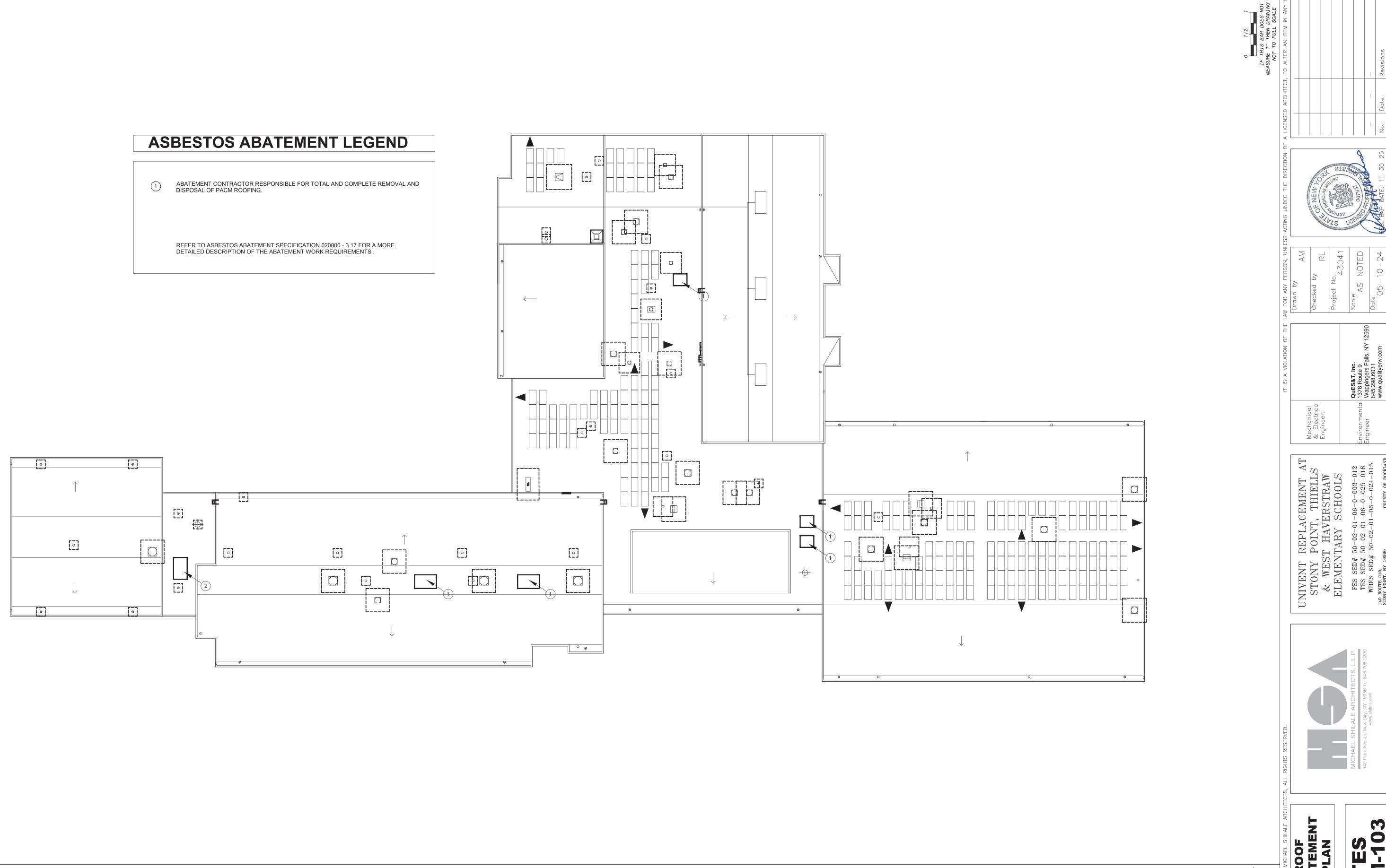
OPEN TO BELOW

CLOSED
OPERABLE
PARTITION

OPEN TO
BELOW

OPERABLE
PARTITION





Project Information

2020 NYStretch Energy Code - 90.1 (2016) Standard Energy Code: UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL Project Title: Location: Thiells, New York Climate Zone: Project Type: Alteration

Construction Site: 78 ROSMAN RD THIELLS, New York 10984 Owner/Agent: Designer/Contractor: NORTH ROCKLAND CENTRAL GREENMAN-PEDERSEN INC SCHOOL DISTRICT 2 EXECUTIVE BLVD 65 CHAPEL STREET SUFFERN 10901 GARNERVILLE 10923 845-942-3000 845-368-4050

Mechanical Systems List

Quantity System Type & Description

4 ACCU-1A, ACCU-1B, ACCU-3A, ACCU-3B VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump Heating Mode: Capacity = 216 kBtu/h, Proposed Efficiency = 3.73 COP, Required Efficiency = 3.20 COP Cooling Mode: Capacity = 243 kBtu/h,
Proposed Efficiency = 10.45 EER, Required Efficiency = 9.30 EER
Proposed Part Load Efficiency = 20.90 IEER, Required Part Load Efficiency = 12.50 IEER

SYSTEM VERIFICATION REQUIRED.

VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump Heating Mode: Capacity = 288 kBtu/h, Proposed Efficiency = 3.36 COP, Required Efficiency = 3.20 COP Cooling Mode: Capacity = 320 kBtu/h, Proposed Efficiency = 9.35 EER, Required Efficiency = 9.30 EER Proposed Part Load Efficiency = 20.10 IEER, Required Part Load Efficiency = 12.50 IEER

SYSTEM VERIFICATION REQUIRED.

2 ACCU-4, ACCU-5

VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump Heating Mode: Capacity = 264 kBtu/h, Proposed Efficiency = 3.44 COP, Required Efficiency = 3.20 COP

Cooling Mode: Capacity = 295 kBtu/h,
Proposed Efficiency = 9.60 EER, Required Efficiency = 9.30 EER
Proposed Part Load Efficiency = 20.25 IEER, Required Part Load Efficiency = 12.50 IEER

SYSTEM VERIFICATION REQUIRED.

VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump Heating Mode: Capacity = 72 kBtu/h, Proposed Efficiency = 4.31 COP, Required Efficiency = 3.30 COP Cooling Mode: Capacity = 80 kBtu/h,
Proposed Efficiency = 14.50 EER, Required Efficiency = 10.80 EER
Proposed Part Load Efficiency = 28.90 IEER, Required Part Load Efficiency = 14.40 IEER

SYSTEM VERIFICATION REQUIRED.

Fan System: None

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QuantitySystem Type & Description

4 Ceiling Cassette, 12 MBH Cooling: 4 each - VRF Zone Fan Unit, Capacity = 12 kBtu/h No minimum efficiency requirement applies

SYSTEM VERIFICATION REQUIRED.

Ceiling Cassette, 8 MBH Cooling: 2 each - VRF Zone Fan Unit, Capacity = 8 kBtu/h No minimum efficiency requirement applies SYSTEM VERIFICATION REQUIRED.

4 Wall Mount, 6 MBH Cooling: 4 each - VRF Zone Fan Unit, Capacity = 6 kBtu/h No minimum efficiency requirement applies

SYSTEM VERIFICATION REQUIRED.

10 Wall Mount, 24 MBH Cooling: 10 each - VRF Zone Fan Unit, Capacity = 24 kBtu/h No minimum efficiency requirement applies

SYSTEM VERIFICATION REQUIRED. 1 100% OA unit Cooling: 1 each - VRF Zone Fan Unit, Capacity = 30 kBtu/h No minimum efficiency requirement applies

SYSTEM VERIFICATION REQUIRED. Ceiling Cassette, 5 MBH

Cooling: 5 each - VRF Zone Fan Unit, Capacity = 5 kBtu/h No minimum efficiency requirement applies SYSTEM VERIFICATION REQUIRED.

1 100% OA unit

Cooling: 1 each - VRF Zone Fan Unit, Capacity = 29 kBtu/h No minimum efficiency requirement applies SYSTEM VERIFICATION REQUIRED.

3 Wall Mount, 4 MBH

Cooling: 3 each - VRF Zone Fan Unit, Capacity = 4 kBtu/h No minimum efficiency requirement applies SYSTEM VERIFICATION REQUIRED.

Mechanical Compliance Statement

Data filename:

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2020 NYStretch Energy Code - 90.1 (2016) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

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▲ COM*check* Software Version COMcheckWeb **Inspection Checklist**

Energy Code: 2020 NYStretch Energy Code - 90.1 (2016) Standard

Requirements: 100.0% were addressed directly in the COMcheck software Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 6.4.4.2.1, 6.7.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. Location on plans/spec: M-001
4.2.2, 8.7 [PR6] ²	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.7.2.4 [PR5] ¹	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. Location on plans/spec: M-001

Additional Comments/Assumptions:

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
6.4.3.7 [FO9] ³	Freeze protection and snow/ice melting system sensors for future	□Complies □Does Not	Exception: Requirement does not apply.
	connection to controls.	□Not Observable □Not Applicable	

Additional Comments/Assumptions:

Data filename:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1] ²	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency:	Efficiency:	□Complies □Does Not □Not Observable	See the Mechanical Systems lis for values.
6.4.3.4.1 [ME3] ³	Stair and elevator shaft vents have motorized dampers that automatically close.			□ Not Applicable □ Complies □ Does Not □ Not Observable □ Not Applicable	Exception: Requirement does not apply.
6.4.3.4.2, 6.4.3.4.3 [ME4] ³	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.			Complies Does Not Not Observable Not Applicable	Requirement will be met. Location on plans/spec: TES M-004
6.4.3.4.5 [ME39] ³	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.4.3.4.4 [ME5] ³	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.3.8 [ME6] ¹	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. Location on plans/spec: TES M-005
6.5.3.2.1 [ME40] ²	DX cooling systems $>= 75 \text{ kBtu/h}$ ($>= 65 \text{ kBtu/h}$ effective 1/2016) and chilled-water and evaporative cooling fan motor hp $>= \frac{1}{4}$ designed to vary supply fan airflow as a function of load and comply with operational requirements.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. Location on plans/spec: TES M-005 See the Mechanical Systems list for values.
6.4.4.1.1 [ME7] ³	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.4.1.2 [ME8] ²	HVAC ducts and plenums insulated per Table 6.8.2. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	R	R	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.4.1.3 [ME9] ²	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	in.	in.	□Complies □Does Not □Not Observable □Not ∧pplicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.4.1.4 [ME41] ³	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.			☐Complies ☐Does Not ☐Not Observable	Exception: Requirement does not apply.
6.4.4.2.1 [ME10] ²	Ducts and plenums having pressure class ratings are Seal			□Not Applicable □Complies □Does Not	Requirement will be met.
-	Class A construction.			□Not Observable □Not Applicable	
6.8.1-15, 6.8.1-16 [ME110] ²	Electrically operated DX-DOAS units meet requirements per Tables 6.8.1-15 or 6.8.1-16.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Exception: Requirement does not apply.
6.4.4.2.2 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.			□Complies □Does Not □Not Observable	Exception: Requirement does not apply.
6.5.2.3 [ME19] ³	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			□Not Applicable □Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.5.2.4.1 [ME68] ³	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.5.2.4.2 [ME69] ³	Humidification system dispersion tube hot surfaces in the airstreams of ducts or airhandling units insulated >= R-0.5.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.5.2.5 [ME70] ³	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.5.2.6 [ME106] ³	Units that provide ventilation air to multiple zones and operate in conjunction with zone heating and cooling systems are prevented from using heating or heat recovery to warm supply air above 60°F when representative building loads or outdoor air temperature indicate that most zones demand cooling.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.5.4.7 [ME107] ³	Chilled-water cooling coils provide a 15°F or higher temperature difference between leaving and entering water temperatures and a minimum of 57°F leaving water temperature at design conditions			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
6.5.3.3 [ME42]³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems lis for values.

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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions		
6.5.4.2 [ME25] ³	HVAC pumping systems with >= 3 control values designed for variable fluid flow (see section			□Complies □Does Not	Exception: Requirement does not apply.		
	details).			□Not Observable □Not Applicable			
6.5.6.1 [ME56] ¹	Exhaust air energy recovery on systems meeting Tables 6.5.6.1-			☐Complies ☐Does Not	Exception: Requirement does not apply.		
	1, and 6.5.6.1-2.			□Not Observable □Not Applicable			
6.5.7.2.1 [ME32] ²	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust			☐Complies ☐Does Not	Exception: Requirement does not apply.		
	air volume.			□Not Observable □Not Applicable			
6.5.7.2.4 [ME49] ³	Approved field test used to evaluate design air flow rates			☐Complies ☐Does Not	Exception: Requirement does not apply.		
	and demonstrate proper capture and containment of kitchen exhaust systems.			□Not Observable □Not Applicable			
6.5.8.1 [ME34] ²	Unenclosed spaces that are heated use only radiant heat.			□Complies □Does Not	Exception: Requirement does not apply.		
				□Not Observable □Not Applicable	1 1 1 1 1		
6.4.3.9 [ME63] ²	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.		
6.5.10 [ME73] ³	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Alteration project to existing building.		
6.4.5 [ME123] ³	Site-assembled or site- constructed walk-in coolers and freezers conform to section details.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.		

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# & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10] ²	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
8.4.3 [EL11] ²	New buildings have electrical energy use measurement devices installed. Where tenant spaces exist, each tenant is monitored separately. In buildings with a digital control system the energy use is transmitted to to control system and displayed graphically.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Exception: Requirement does not apply.
10.4.1 [EL9] ²	Electric motors meet requirements where applicable.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
1	Mechanical systems, Renewable Systems, and SWH Commissioning:	□Complies □Does Not	Requirement will be met.
	Furnished HVAC as-built drawings submitted within 90 days of system acceptance. See section details.	□Not Observable □Not Applicable	

	1 High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)]
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Date Classic						

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
6.4.3.1.2 [FI3] ³	Thermostatic controls have a 5 °F deadband.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
6.4.3.2 [FI20] ³	Temperature controls have setpoint overlap restrictions.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
6.4.3.3.1 [FI21] ³	HVAC systems equipped with at least one automatic shutdown control.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
6.4.3.3.2 [FI22] ³	Setback controls allow automatic restart and temporary operation as required for maintenance.	□Complies □Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
6.4.3.5 [FI5] ³	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	□Complies □Does Not	Requirement will be met. Location on plans/spec: TES M-005
	-	□ Not Observable □ Not Applicable	
6.4.3.6 [FI6] ³	When humidification and dehumidification are provided to a zone, simultaneous operation is	□Complies □Does Not	Requirement will be met.
	prohibited. Humidity control prohibits the use of fossil fuel or electricity to produce RH > 30% in the warmest zone humidified and RH < 60% in the coldest zone dehumidified.	□Not Observable □Not Applicable	
6.7.2.1 [FI7] ³	Furnished HVAC as-built drawings submitted within 90 days of system	□Complies □Does Not	Requirement will be met.
	acceptance.	□Not Observable □Not Applicable	
6.7.2.2 [FI8] ³	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not	Requirement will be met.
	·	□Not Observable □Not Applicable	
6.7.2.3 [FI9] ¹	An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft2 of	□Complies □Does Not	Requirement will be met.
	conditioned area.	□Not Observable □Not Applicable	
6.7.2.4 [FI10] ¹	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	□Complies □Does Not	Requirement will be met.
	,	□Not Observable □Not Applicable	
10.4.3 [FI24] ²	Elevators are designed with the proper lighting, ventilation power, and standby mode.		Exception: Requirement does not apply.
	·	□ Not Observable □ Not Applicable	
C408.2.4 [FI29] ¹	Mechanical systems, Renewable Systems, and SWH Commissioning: Preliminary commissioning report completed and certified by registered design professional or approved agency. See section details.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

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